

Project Title	Funding	Strategic Plan Objective	Institution
TMLHE deficiency and a carnitine hypothesis for autism	\$0	Q2.S.D	Baylor College of Medicine
Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome	\$0	Q2.S.D	University of North Carolina
Autism and the insula: Genomic and neural circuits	\$0	Q2.Other	California Institute of Technology
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	\$0	Q2.S.D	Columbia University
Genetic studies of autism-related Drosophila neurexin and neuroligin	\$0	Q2.Other	University of Texas Health Science Center, San Antonio
Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase	\$0	Q2.S.D	University of North Carolina
Role of CNTNAP2 in neuronal structural development and synaptic transmission	\$0	Q2.Other	Stanford University
DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS	\$0	Q2.Other	NORTHWESTERN UNIVERSITY
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	\$0	Q2.Other	Baylor College of Medicine
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	\$0	Q2.Other	University of California, Irvine
High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism	\$0	Q2.Other	Weill Cornell Medical College
Connections between autism, serotonin and hedgehog signaling	\$0	Q2.S.D	Medical Research Council-National Institute for Medical Research
Physiological studies in a human stem cell model of 15q duplication syndrome	\$0	Q2.S.D	University of Connecticut
Molecular signatures of autism genes and the 16p11.2 deletion	\$0	Q2.Other	Massachusetts General Hospital
Role of endosomal NHE6 in brain connectivity and autism	\$0	Q2.Other	Brown University
A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons	\$0	Q2.Other	University of California, San Francisco
Why are autistic females rare and severe? An approach to autism gene identification.	\$0	Q2.S.B	Johns Hopkins University
Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	\$0	Q2.S.D	Stanford University
Interrogating Synaptic Transmission in Human Neurons	\$0	Q2.Other	Stanford University
Corticogenesis and Autism Spectrum Disorders: New Hypotheses on Transcriptional Regulation of Embryonic Neurogenesis by FGFs from In Vivo Studies and RNA-sequencing Analysis of Mouse Brain	\$0	Q2.Other	Yale University
A Novel Glial Specific Isoform of Cdkl5: Implications for the Pathology of Autism in Rett Syndrome	\$0	Q2.S.D	University of Nebraska
Beta-catenin signaling in autism spectrum disorders	\$0	Q2.S.G	University of Illinois at Chicago
Impact of NR2B mutations on NMDA receptors and synapse formation	\$0	Q2.Other	Case Western Reserve University

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Sex-Specific Gene-Environment Interactions Underlying ASD	\$0	Q2.S.B	Rockefeller University
Restoring cortical plasticity in a Rett mouse model	\$0	Q2.S.D	Stanford University
Matrix metalloproteinases expression in autism spectrum disorders	\$0	Q2.Other	University of Naples
TSC/mTOR Signaling in Adult Hippocampal Neurogenesis: Impact on Treatment and Behavioral Models of Autism Spectrum Disorders in Mice	\$0	Q2.Other	University of California, Los Angeles
The Interplay Between Human Astrocytes and Neurons in Psychiatric Disorders	\$0	Q2.Other	University of California, San Diego
Modeling Microglial Involvement in Autism Spectrum Disorders, with Human Neuro-glial Co-cultures	\$0	Q2.S.D	Whitehead Institute for Biomedical Research
Signaling Pathways that Regulate Excitatory-inhibitory Balance	\$0	Q2.Other	University of California, San Diego
Mouse Model of Dup15q Syndrome	\$670	Q2.S.D	Texas AgriLife Research
Undergraduate Research Award	\$3,000	Q2.S.G	Harvard University
Undergraduate Research Award	\$3,000	Q2.S.G	Rutgers University
Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS	\$14,920	Q2.Other	BRANDEIS UNIVERSITY
The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia	\$15,000	Q2.Other	Cincinnati Children's Hospital Medical Center
Abnormalities in signal transduction in autism	\$20,000	Q2.S.A	New York State Institute for Basic Research in Developmental Disabilities
A Novel GABA Signalling Pathway in the CNS	\$25,000	Q2.Other	MCLEAN HOSPITAL
Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome	\$27,349	Q2.S.D	Columbia University
Identification and validation of genetic variants which cause the Autism Macrocephaly subphenotype	\$29,500	Q2.S.G	University of California, Los Angeles
Studying Rett and Fragile X syndrome in human ES cells using TALEN technology	\$30,000	Q2.S.D	Whitehead Institute for Biomedical Research
Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4	\$30,000	Q2.S.D	University of North Carolina
Investigating the Role of RBFOX1 in Autism Etiology	\$30,000	Q2.Other	University of Miami
Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders	\$30,000	Q2.Other	Max Planck Florida Institute for Neuroscience
A Role for Cytoplasmic Rbfox1/A2BP1 in Autism	\$30,000	Q2.Other	University of California, Los Angeles
α -Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	\$30,000	Q2.Other	University of California, Davis
Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development	\$30,000	Q2.S.G	University of British Columbia

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Dissecting Reciprocal CNVs Associated With Autism	\$30,000	Q2.Other	Duke University
Modulation of RhoA Signaling by the mRNA Binding Protein hnRNPQ1	\$31,356	Q2.Other	Emory University
The Striatal Circuitry Underlying Autistic-Like Behaviors	\$32,419	Q2.Other	Duke University
Disruption of Reelin biosynthesis by de novo missense mutations found in aut	\$33,059	Q2.Other	UPSTATE MEDICAL UNIVERSITY
Cortactin and Spine Dysfunction in Fragile X	\$33,319	Q2.S.D	University of California, Irvine
A Novel Essential Gene for Human Cognitive Function	\$35,030	Q2.S.D	HARVARD MEDICAL SCHOOL
Timed mRNA translation events in neocortical development and neurodevelopmental disorders	\$39,276	Q2.Other	RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL
The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders	\$45,000	Q2.Other	Johns Hopkins University
Investigating the role of Tsc1 in neocortical circuit assembly	\$47,114	Q2.S.D	Stanford University
Understanding the Role of Epac2 in Cognitive Function	\$47,676	Q2.Other	NORTHWESTERN UNIVERSITY
Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis	\$51,400	Q2.S.D	National Institutes of Health
Dissecting the 16p11.2 CNV endophenotype in induced pluripotent stem cells	\$51,400	Q2.S.D	University of California, San Francisco
Identification of genetic pathways that regulate neuronal circuits in C. elegans	\$51,530	Q2.Other	UNIVERSITY OF CALIFORNIA SAN DIEGO
MAGEL2, a candidate gene for autism and Prader-Willi syndrome	\$52,224	Q2.S.D	University of Alberta
Analysis of MEF2 in Cortical Connectivity and Autism-Associated Behaviors	\$53,282	Q2.S.D	MCLEAN HOSPITAL
Investigating role of neurexin-1 mutation in autism using human induced neurons	\$53,282	Q2.Other	Stanford University
Frontostriatal Synaptic Dysfunction in a Model of Autism	\$55,094	Q2.Other	Stanford University
Role of Neurexin in Synapse Formation and Maintenance	\$56,978	Q2.Other	Stanford University
Regulation of cortical circuits by tsc1 in GABAergic interneurons	\$59,113	Q2.S.B	Yale University
Dendritic 'translatome' in fragile X syndrome and autism	\$60,000	Q2.S.D	University of Michigan
The Role of Glia in Fragile X Syndrome	\$60,000	Q2.S.D	Johns Hopkins University
Dysregulation of Mdm2-mediated p53 ubiquitination in autism mouse models	\$60,000	Q2.S.D	University of Illinois at Chicago
Using fruit flies to map the network of autism-associated genes	\$62,498	Q2.Other	University of California, San Diego
Analysis of autism linked genes in C. elegans	\$62,500	Q2.Other	Massachusetts General Hospital

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Genetic model to study the ASD-associated gene A2BP1 and its target PAC1	\$62,500	Q2.Other	Weizmann Institute of Science
Motor cortex plasticity in MeCP2 duplication syndrome	\$62,500	Q2.S.D	Baylor College of Medicine
Sexually dimorphic gene-expression and regulation to evaluate ASD sex bias	\$62,500	Q2.S.B	University of California, San Francisco
Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice	\$66,667	Q2.Other	New York University
Phenotypic Characterization of MECP2 Mice	\$66,830	Q2.S.D	Children's Hospital of Philadelphia
Neurologin, oxidative stress and autism	\$75,000	Q2.Other	Oklahoma Medical Research Foundation
Striatal Specific Alterations in Translation, Synaptic Function, and Behavior in	\$81,581	Q2.Other	New York University
Cortical inhibition and disrupted vocal perception in MeCP2 +/- mice	\$81,970	Q2.S.D	Cold Spring Harbor Laboratory
Dissecting Epistasis and Pleiotropy in Autism towards Personalized Medicine	\$83,334	Q2.S.G	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
Foxp2 regulation of sex specific transcriptional pathways and brain development	\$88,128	Q2.S.B	University of Maryland
Protein Interaction Network Analysis to Test the Synaptic Hypothesis of Autism	\$90,000	Q2.Other	MAYO CLINIC ROCHESTER
Molecular mechanisms of electrical synapse formation in vivo	\$90,000	Q2.Other	FRED HUTCHINSON CANCER RESEARCH CENTER
Functional analysis of EPHB2 mutations in autism - Project 1	\$90,616	Q2.Other	Yale University
Mechanisms and Rescue of Neural Circuit Dysfunction in Mecp2 Mutant Mice	\$92,578	Q2.S.D	BAYLOR COLLEGE OF MEDICINE
THE ROLE OF MECP2 IN RETT SYNDROME	\$100,000	Q2.S.D	University of California, Davis
Project 4: Calcium Signaling Defects in Autism (Pessah/Lein)	\$107,377	Q2.Other	University of California, Davis
Functional analysis of EPHB2 mutations in autism	\$124,950	Q2.Other	MCLEAN HOSPITAL
CNTNAP2 regulates production, migration and organization of cortical neurons	\$124,996	Q2.Other	Memorial Sloan-Kettering Cancer Center
Role of LIN28/let-7 axis in autism	\$125,000	Q2.Other	Johns Hopkins University
Pathogenic roles of paternal-age-associated mutations in autism	\$125,000	Q2.Other	Weill Cornell Medical College
Translational dysregulation in autism pathogenesis and therapy	\$125,000	Q2.S.D	Massachusetts General Hospital
The role of UBE3A in autism	\$125,001	Q2.S.D	Harvard Medical School
MicroRNAs in Synaptic Plasticity and Behaviors Relevant to Autism	\$131,220	Q2.S.D	Massachusetts General Hospital
A functional genomic analysis of the cerebral cortex	\$142,273	Q2.Other	University of California, Los Angeles

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TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	\$147,806	Q2.S.D	Case Western Reserve University
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	\$149,044	Q2.S.D	King's College London
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	\$149,937	Q2.S.D	Boston Children's Hospital
Mechanisms of synapse elimination by autism-linked genes	\$150,000	Q2.S.D	University of Texas Southwestern Medical Center
Neural Correlates of the Y Chromosome in Autism: XYY Syndrome as a Genetic Model	\$153,479	Q2.S.D	Nemours Children's Health System, Jacksonville
Mesocorticolimbic dopamine circuitry in mouse models of autism	\$174,944	Q2.S.D	Stanford University
Genetically defined stem cell models of Rett and fragile X syndrome	\$175,000	Q2.S.D	Whitehead Institute for Biomedical Research
Activity-dependent phosphorylation of MeCP2	\$177,055	Q2.S.D	HARVARD MEDICAL SCHOOL
mTOR modulation of myelination	\$179,659	Q2.S.D	Vanderbilt University
Role of GABA interneurons in a genetic model of autism	\$187,455	Q2.S.D	Yale University
Mechanisms Underlying the Cerebellar Contribution to Autism in Mouse Models of Tu	\$190,458	Q2.S.D	CHILDREN'S HOSPITAL CORPORATION
Cytoplasmic Functions of Rbfox1, a Candidate Autism Gene	\$192,500	Q2.Other	University of California, Los Angeles
UBR7 is a novel chromatin directed E3 ubiquitin ligase	\$194,545	Q2.Other	UNIVERSITY OF VIRGINIA
Using Drosophila to Characterize the Molecular Pathogenesis of Autism	\$195,000	Q2.Other	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Variation in Neuroligin Concentration and Presynaptic Functional Development	\$196,979	Q2.Other	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster	\$202,745	Q2.Other	University of California, Los Angeles
Targeting the PI3K Enhancer PIKE to Reverse FXS-associated Phenotypes	\$206,000	Q2.S.D	Emory University
Role of Draxin in Forebrain Connectivity and Complex Behaviors	\$216,128	Q2.Other	WADSWORTH CENTER
Neurobiology of Aggression Co-morbidity in Mouse Model of Idic15 Autism	\$217,500	Q2.S.E	BETH ISRAEL DEACONESS MEDICAL CENTER
Wnt modulation as a treatment for Autism Spectrum Disorders	\$222,318	Q2.Other	UNIVERSITY OF IOWA
Protein network of high risk copy number variants for psychiatric disorders	\$227,135	Q2.Other	UNIVERSITY OF CALIFORNIA SAN DIEGO
Identification of TSC cellular phenotypes using patient-derived iPSCs	\$229,322	Q2.S.D	Rutgers University

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Imaging of protein synthesis and ubiquitination in fragile x syndrome	\$234,000	Q2.S.D	Emory University
Role of autism-associated chromatin remodeler Brg1 in neuronal development	\$238,500	Q2.Other	UT SOUTHWESTERN MEDICAL CENTER
Met Signaling in Neural Development and Circuitry Formation	\$238,640	Q2.Other	UNIVERSITY OF ARIZONA
Interneuron subtype-specific malfunction in autism spectrum disorders	\$240,000	Q2.Other	New York University
Mechanisms of Autonomic Brainstem Development	\$243,000	Q2.Other	Children's Hospital Los Angeles
Novel candidate mechanisms of fragile X syndrome	\$248,873	Q2.S.D	UNIVERSITY OF MICHIGAN
Presynaptic Fragile X Proteins	\$249,000	Q2.S.D	DREXEL UNIVERSITY
Fragile X syndrome target analysis and its contribution to autism	\$249,272	Q2.S.D	Vanderbilt University
Probing synaptic receptor composition in mouse models of autism	\$249,994	Q2.S.D	Boston Children's Hospital
Multigenic basis for autism linked to 22q13 chromosomal region	\$249,999	Q2.S.D	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY
RNA dysregulation in autism	\$250,000	Q2.Other	Rockefeller University
Molecular control of prefrontal cortical circuitry in autism	\$254,250	Q2.Other	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
Reducing Diversity at the Gamma Protocadherin Locus by CRISPR Targeting	\$275,342	Q2.Other	JACKSON LABORATORY
Neural Correlates of the Y Chromosome in Autism: XYY Syndrome as a Genetic Model	\$290,609	Q2.S.D	Children's Hospital of Philadelphia
Caspr2 as an autism candidate gene: a proteomic approach to function & structure.	\$318,000	Q2.Other	RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL
Role of UBE3A in the Central Nervous System	\$321,269	Q2.S.D	University of North Carolina
Molecular Dissection of Calmodulin Domain Functions	\$321,473	Q2.Other	UNIVERSITY OF IOWA
Inhibitory mechanisms for sensory map plasticity in cerebral cortex.	\$323,873	Q2.Other	University of California, Berkeley
Elucidating the Function of Class 4 Semaphorins in GABAergic Synapse Formation	\$333,553	Q2.Other	BRANDEIS UNIVERSITY
Functional analysis of Neuroligin-Neurexin interactions in synaptic transmission	\$336,875	Q2.Other	University of Massachusetts, Worcester
Revealing protein synthesis defects in Fragile X Syndrome with new chemical tools	\$347,427	Q2.S.D	Stanford University
THE ROLE OF MECP2 IN RETT SYNDROME	\$353,130	Q2.S.D	University of California, Davis
MeCP2 Modulation of BDNF Signaling: Shared Mechanisms of Rett and Autism	\$371,057	Q2.S.D	UNIVERSITY OF ALABAMA AT BIRMINGHAM
Engrailed targets and the control of synaptic circuits in Drosophila	\$371,250	Q2.Other	UNIVERSITY OF PUERTO RICO MED SCIENCES

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Translational Regulation of Adult Neural Stem Cells	\$372,621	Q2.S.D	University of Wisconsin
Translation, Synchrony, and Cognition	\$376,430	Q2.S.D	New York University
Neurobiological Mechanism of 15q11-13 Duplication Autism Spectrum Disorder	\$376,818	Q2.S.D	BETH ISRAEL DEACONESS MEDICAL CENTER
Optogenetic treatment of social behavior in autism	\$385,000	Q2.Other	University of California, Los Angeles
PHENOTYPING ASTROCYTES IN HUMAN NEURODEVELOPMENTAL DISORDERS	\$386,750	Q2.Other	Stanford University
Role of MEF2 and neural activity in cortical synaptic weakening and elimination	\$387,160	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
Molecular mechanisms of the synaptic organizer alpha-neurexin	\$388,750	Q2.Other	UNIVERSITY OF TEXAS MEDICAL BR GALVESTON
Allelic Choice in Rett Syndrome	\$390,481	Q2.S.D	WINIFRED MASTERSON BURKE MED RES INST
Genetic and Developmental Analyses of Fragile X Mental Retardation Protein	\$394,554	Q2.S.D	Vanderbilt University
New Models For Astrocyte Function in Genetic Mouse Models of Autism Spectrum Diso	\$396,250	Q2.S.D	CLEVELAND CLINIC LERNER COM-CWRU
Shank3 in Synaptic Function and Autism	\$401,250	Q2.Other	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
The Impact of Pten Signaling on Neuronal Form and Function	\$405,000	Q2.Other	DARTMOUTH COLLEGE
HIGH THROUGHPUT SCREEN FOR SMALL MOLECULE PROBES FOR NEURAL NETWORK DEVELOPMENT	\$405,000	Q2.Other	Johns Hopkins University
Mechanisms of mGluR5 function and dysfunction in mouse autism models	\$405,319	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
Monoallelic expression in neurons derived from induced pluripotent stem cells	\$414,150	Q2.Other	ALBERT EINSTEIN COLLEGE OF MEDICINE
Biology of Non-Coding RNAs Associated with Psychiatric Disorders	\$415,143	Q2.Other	UNIVERSITY OF SOUTHERN CALIFORNIA
Analysis of Shank3 Complete and Temporal and Spatial Specific Knockout Mice	\$425,202	Q2.Other	Duke University
Regulation of SK2 channels by UBE3A	\$425,708	Q2.Other	WESTERN UNIVERSITY OF HEALTH SCIENCES
Dissecting neural mechanisms integrating multiple inputs in C. elegans	\$453,240	Q2.Other	SALK INSTITUTE FOR BIOLOGICAL STUDIES
BDNF and the Restoration of Synaptic Plasticity in Fragile X and Autism	\$453,289	Q2.S.D	University of California, Irvine
Dysregulation of mTOR Signaling in Fragile X Syndrome	\$487,251	Q2.S.D	ALBERT EINSTEIN COLLEGE OF MEDICINE
Function of Neurexins	\$488,615	Q2.Other	Stanford University
Signaling mechanisms in cerebellar development and function	\$494,324	Q2.Other	Vanderbilt University
Bidirectional Tyrosine Kinase Signaling	\$614,042	Q2.Other	UT SOUTHWESTERN MEDICAL CENTER

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Impact of SynGAP1 Mutations on Synapse Maturation and Cognitive Development	\$614,568	Q2.Other	SCRIPPS FLORIDA
Neurotrophic Factor Regulation of Gene Expression	\$615,631	Q2.S.D	HARVARD MEDICAL SCHOOL
Dynamic regulation of Shank3 and ASD	\$616,945	Q2.Other	Johns Hopkins University
A Family-Genetic Study of Autism and Fragile X Syndrome	\$632,570	Q2.S.D	NORTHWESTERN UNIVERSITY
Next Generation Gene Discovery in Familial Autism	\$653,540	Q3.L.B	University of Washington
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	\$657,501	Q2.S.G	SLOAN-KETTERING INST CAN RESEARCH
Function and Structure Adaptations in Forebrain Development	\$662,342	Q2.Other	Children's Hospital Los Angeles
Tet-mediated Epigenetic Modulation in Autism	\$684,145	Q2.S.D	Emory University
MRI Biomarkers of Patients with Tuberous Sclerosis Complex and Autism	\$716,468	Q2.S.D	CHILDREN'S HOSPITAL CORPORATION
The Elongation Hypothesis of Autism	\$752,400	Q2.Other	University of North Carolina
Dysregulation of Protein Synthesis in Fragile X Syndrome	\$1,060,826	Q2.S.D	National Institutes of Health
Functional Genomics of Human Brain Development	\$1,338,015	Q2.Other	Yale University

